Book of the month

Biopsychosocial Medicine

Almost two-and-a-half millennia have passed since Hippocrates, in his *Airs, Waters and Places*,[1] noted the importance of the social milieu in disease aetiology, and a millennium since Ibn Sina (Avicenna) examined the interrelation between psyche and soma.[2] In one memorable case a person in the royal household sought Ibn Sina's advice during an attack of acute lumbago. Suspecting a psychosomatic aetiology, the great man asked an aide to publicly remove her scarf. Seeing that this did not produce the intended outcome he then raised the stakes—to the horror of others present—and ordered the aide to remove the patient's trousers. Faced with this threat the patient immediately jumped from the couch and ran out of the room. In a second case he was asked to see a young man whose affliction had baffled the most brilliant medical minds in his area. Ibn Sina talked at length with the young man about his day-to-day habits, carefully monitoring his pulse as they spoke. He noted how the young man's pulse began to race when the subject turned to the local baker's shop, to which it transpired he made regular visits. Once on the scent, Ibn Sina quickly observed that the pulse quickened yet further when mention was made of the baker's sister. The diagnosis was love sickness, and his prescription of marriage (fortunately acceptable to all concerned) proved effective. Ibn Sina was thus able to demonstrate that important criterion of a causal association, reversibility.[3]

Perspectives changed greatly in subsequent centuries—especially when the Enlightenment in Western Europe removed the religious shackles from science and the new freedom to dissect the human body allowed the study of anatomy and physiology. It was this focus on the organic that catalysed the emergence of biomedicine as the dominant paradigm, yielding manifold advances in the understanding of disease processes, their treatment and their prevention.[4] But medical thought tends to proceed in cycles, and a return to the concept that illness has important social as well as physical components was marked by the 1946 declaration from the World Health Organization that 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.[5] Since then, the behavioural and social sciences have gained firm footholds in medical and nursing curricula.

Biopsychosocial Medicine: An Integrated Approach to Understanding Illness[6] is the product of a two-day conference held under the auspices of One Health—an organization that seeks to promote a system of healthcare based on this approach—and the Novartis Foundation. In his preface the convenor, Peter White tells us that his rationale for organizing the conference was a concern that medicine is travelling up a blind alley in its attempt to help patients improve their health and reduce their disability. 'This blind alley is the biomedical approach . . .' The twenty-eight participants, who represented psychiatry, medical history, general practice, epidemiology, and psychology, were asked to deliberate on whether the model is a luxury or a necessity, and a key reference point was George Engel's famous 1977 paper in which the term biopsychosocial medicine first appeared.[7] But it was Engel's follow-on paper, looking at clinical applications of the model,[8] that generated special passion among the contributors.[8] So far as my own discipline is concerned, I confess to puzzlement about this whole enterprise: primary care, in its quest to deliver holistic patient-centred care, has long since embraced the biopsychosocial approach—as was indeed made clear at the conference.

Among the many thoughtful contributions I would single out Edward Shorter's history of the biopsychosocial approach, including an account of Engel's personal metamorphosis from internist to psychoanalyst and then psychiatrist. Ultimately, Engel gained a joint appointment as both internist and psychiatrist, from which position he endeavoured to make bridges between the warring schools of psychiatry. Another is Michael Marmot's summary of the Whitehall studies on the influence of social position on health outcomes, in which he offers some ideas on possible biological mechanisms through which social and psychological factors may impact on molecular processes. Marmot's chapter, however, is closely followed by a warning from George Davey Smith against the too ready assumption that an association signifies cause and effect. To illustrate the pitfalls of confounding and bias he offers a striking set of 'cautionary tales'. An example is the peptic ulcer story: such was the consensus that this condition was stress-induced that otherwise careful researchers overlooked important epidemiological and other evidence pointing to an infective causation. Whilst Davey Smith is undoubtedly right on the need to distinguish association from causation—something that Hippocrates famously failed to do—his second main conclusion is harder to accept. He contends that, in public-health terms, if a chain of causation could be broken—for example, by removing tobacco from the chain linking social class and lung cancer—the social and psychological factors would cease to be important. This is surely too simple an interpretation. Even if tobacco could be eliminated from the equation—which is very doubtful when we remember the US experience with alcohol prohibition—we could expect the tobacco habit to be replaced often by other forms of self-destructive behaviour.

How does *Biopsychosocial Medicine* move the subject on? Despite valiant attempts by Simon Wessely and Peter White to draw practical messages, I have to say not greatly.

Aziz Sheikh
Division of Community Health Sciences: GP Section,
University of Edinburgh, 20 West Richmond Street,
Edinburgh EH8 9DX, Scotland, UK
E-mail: aziz.sheikh@ed.ac.uk

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Management Mistakes In Healthcare: Identification, Correction and Prevention

Editors: Paul Hofmann, Frankie Perry
255 pp Price £50; US$90 ISBN 0-521-82900-3 (h/b)
Cambridge: Cambridge University Press

We are told by one of the contributing authors that 'King Henry VIII died of syphilis, having never produced a surviving male heir for his throne', which would have puzzled Edward VI, his son and successor. Who was responsible for this error? According to this book we should look beyond the individual author and consider the ways in which system defects allowed such a mistake to occur; the two academic editors, the proofreader, the production editor, the copy editor and the publisher should all be considered along with the way a book is produced. Analysis of the error should result in self-reflection and changes to the system so that errors are less likely to occur in the future. Naming, blaming and shaming should be avoided. People should view mistakes as learning opportunities. Indeed, very little learning occurs without some mistakes being made.

Over the past decade much attention has been paid to medical errors, with a focus on the activities of clinicians. Little attention has been given to managerial or executive errors, though these can have far greater impact. Managerial errors are often, unlike medical errors, distant from the adverse impact and their effect is therefore more difficult to detect and attribute. *Management Mistakes in Healthcare* starts to redress the balance. Edited and written by healthcare executives in the US, it is aimed principally at colleagues in that country. While the underlying messages are equally applicable outside the US, the focus on profits, market share and other financial goals means the non-American reader needs to translate the material for health systems that have other drivers and aims.

The book covers the whole field—defining mistakes; classifying and interpreting them; how mistakes evolve; techniques for identifying and disclosing errors; the relationship between clinical and managerial mistakes; and preventing and correcting errors. In addition to chapters considering each of these areas, seven case studies illustrate the issues raised. Two experienced British commentators reflect on the material from a non-US perspective.

Of all the issues raised, the definition of an error is perhaps the most critical. One reason why managerial errors can be hard to recognize is the need to consider acts of omission as much as acts of commission. In addition, standards of performance are less clear than in clinical work. And as with medical errors, what constitutes an error will depend to some extent on the particular circumstances and the perspective adopted. The authors provide a helpful typology with seven types of error—legal; organizational; financial; political; professional; ethical; social; and psychological. While intentional wrongdoing is rightly excluded (as something that needs dealing with in line with other criminal activity), there remains the question of defining managerial negligence. The authors suggest four criteria that all have to be fulfilled for an act to be deemed negligent: the decision taken is one that a reasonable person would consider risky; a bad outcome occurs; risky behaviour is the proximate cause; and a reasonable person would have foreseen the consequences. So, unintended and unforeseeable bad outcomes would not be deemed an error.

While this book is a useful contribution to our thinking about managerial errors, it raises many questions. First, locating the primary responsibility for errors on the system rather than the individual can be taken too far. Presumably there are situations where, despite an excellent organization, individuals fall short of expectations and harm occurs? Always blaming the organization has a suggestion of political correctness about it. While there are good reasons from

patients' and payers' points of view to adopt no-fault approaches when bad outcomes occur, there is the danger of creating, in the words of one of the authors, a 'no-fault paradise'.

Second, if too much attention is focused on the consequences of managers' actions, there is a danger of 'defensive management' similar to 'defensive medicine'. Excessive risk avoidance by managers may harm organizations and be to the detriment of patients. It may also mean that managers working in high-risk areas of healthcare (such as medium secure psychiatric facilities) where 'mistakes' are more likely in view of the patients served, will be unfairly criticized. Some means of risk adjustment (similar to that used in comparing clinicians' performance) is needed if we are to avoid creating areas of healthcare provision that deter managers from entering.

Third, there is a close and complex interrelation between managerial and medical errors. Distinguishing between them can be tricky. One American example will be familiar to managers in the British NHS—the impossibility of appointing an additional consultant to reduce waiting times if the existing consultants block the move because they want to protect their personal income. Are the persistent long waiting times (a managerial failing) the fault of the managers, the clinicians or simply 'the system'? Managers will understandably resent being held responsible for a failing that is not of their making. They are also painfully aware that clinicians can blame them for medical errors: the poor clinical outcome was the result of the managers depriving us of sufficient staff, expensive drugs, etc. This approach can also be used effectively by clinicians to resist changes and challenges to professional boundaries. Shroud-waving remains a potent weapon.

Despite these and other loose ends, this book is a welcome first attempt to redress the balance and start examining managerial errors in the way medical errors have been scrutinized of late. The fact there are areas of ambiguity and uncertainty simply confirms the need for more attention to be paid to this topic.

Nick Black
London School of Hygiene & Tropical Medicine,
Keppel Street, London WC1E 7HT, UK

The Ethical Brain

Michael S Gazzaniga
201 pp Price £17.50 ISBN 1-932594-01-9 (h/b)
New York/ Washington, DC: Dana Press

The sciences of mind and brain are today attracting almost as much hype and hope as genetics. And just as genetics gave rise to 'genethics' through the study of its ethical, legal and social implications (ELSI), so too we are seeing the invention of 'neuroethics'. At the forefront of this development is the Dana Foundation, which published the book here reviewed; and among others who have debated the subject is the (US) President's Council on Bioethics, of which Professor Gazzaniga is a member. Books such as Gazzaniga's are generally to be welcomed, in providing tools to help the non-neuroscientist grasp the ethical, social, legal and indeed philosophical aspects of this subject. (Others who have trodden this path are Steven Rose, Susan Greenfield and the Dana Foundation itself.) In *The Ethical Brain* Gazzaniga discusses four of the central topics of concern—life-span neuroethics, brain enhancement, free will and personal responsibility, and the relationship between brain structure and moral decision-making. The first two of these were examined in detail by the President's Council on Bioethics, and readers familiar with the resultant publications may take a 'kremlinological' interest in his departures from the Council's corporate line. But for most readers the book will be valued for its clear and straightforward accounts of current neuroscientific thinking on such topics as when an embryo acquires personhood, what brainstem death is, how far neuroscience undermines the possibility of free will, and what kind of cognitive enhancements or behavioural modifications will be possible. Gazzaniga has little to say about psychiatry or neurosurgery.

The focus of his attention is largely on the policy implications of neuroscientific knowledge. However, much of what he discusses lies properly within the domain of philosophy. Empirical evidence from the neurosciences constrains what conceptual frameworks we may use to make sense of brain and mind, but it does not actually fix which of those frameworks makes most consistent and coherent sense. For example, how much does knowledge of the early development of the nervous system help in determining whether an embryo is a human being, or indeed a human person, and when it becomes so? If *a priori* we have decided that sentience and the capacity for developing self-consciousness are the necessary conditions for personhood, then neuroscience data will help us decide what operational or diagnostic criteria need to be met for these conditions to be satisfied. This conceptual clarification is necessary and is independent of the neuroscience research, on pain of circularity in reasoning. Yet in public debates on neuroethics we are tending to look to neuroscientists as the experts who will tell us whether a 3-day, a 30-day or a 130-day embryo or fetus is a person or not. I am not suggesting that we should turn to philosophers (or theologians) instead; rather that a genuinely interdisciplinary discussion is necessary. Similar difficulties arise with the discussion of responsibility as understood by neuroscientists, philosophers, and the courts, and with

discussions of the nature and legitimate limits to cognitive enhancement. Gazzaniga provides much useful information and material for discussion, but for enlightenment on the deep philosophical and ethical issues salient to the neurosciences, the reader needs to go elsewhere.

While noting that the philosophical level is not high, I did enjoy this book, and can warmly recommend it as an introduction for the non-neuroscientist. Gazzaniga's writing style is pleasantly informal, and how refreshing it is to read a scientist who engages in debate without hyping up either promise or perils.

Richard E Ashcroft
Medical Ethics Unit
Imperial College London, UK

Other books received

On the table in my window sits a collection of books for which, with my editorship running out, I failed to find a reviewer. On top of the pile is Dr Ayan Panja's *An Essential Medical Miscellany*,[1] advertised in the *JRSM* as 'everything you ever wanted to know about medicine and much more.' The book is an obvious though undeclared imitation of the best-seller *Schott's Original Miscellany*, right down to shape and size, but I am not convinced that Panja shares Schott's obsessive attention to detail. Where Schott gives us verbatim the Irish Code Duello of 1777 (rules for duelling in Ireland), Panja tells us that 'In Paraguay, duelling is legal provided both parties are registered blood donors'. These very words can be found on numerous internet sites: Schott, I think, would have made inquiries in Paraguay and (if the statement is true) offered guidance on how to issue the challenge—for instance, 'Sir, I demand satisfaction if you, like me, are a registered blood donor'. Among the few referenced items in the book are the Wilson and 'Junger' criteria for screening: if this entry persuades people that screening is not always a good idea, three cheers—but the next edition should spell Jungner correctly. Panja's method for taking the blood pressure seems to require three hands. I am of course nitpicking; in truth this miscellany is what used to be called a commonplace book—an engaging collection of random facts and factoids. Harmless fun.

Now some historical items. *The History of Albuminous Nephritis*[2] is a translation from the French and Latin of a work by Pierre-François Olive Rayer (1793–1867) originally published in 1840. In his introduction, Campbell Mackenzie describes Rayer as 'one of the foremost and greatest physicians to have adorned the renal specialty, dwarfing in many ways the achievements of his renowned colleague, friend and inspiration, Richard Bright.' Rayer was the first to distinguish acute from chronic nephritis, and his *History* bemoans the failure of clinicians for many generations before Bright to see the connection between dropsy and an abnormality of the kidneys. Read these translations with their accompanying commentaries, and you will wonder just how the work of this great clinician-scientist could have been so widely ignored across the Channel. The answer, alas, is chauvinism. I looked up Rayer in another work received for review, *Bibliography of Medical and Biomedical Biography*,[3] and found two books (in French) published in 1931 and 1997. Now in its third edition, with about 40% more biographies than the second, Morton and Moore clearly retains its place as a prime work of reference. Lastly, a word about David Hay's history of the St. Alban's Medical Club, *Honest Talk and Wholesome Wine*.[4] The club, which has been meeting since 1789, has had some very famous members, including Richard Bright and Thomas Addison. However, scientific discourse was not its main purpose, and Dr Hay's account tells us about personalities and interactions—wagers, blackballing and so on. Much of the book consists of mini-biographies of the members, derived principally from sources other than the club records. Seemingly the wine and talk were not much to the taste of Addison or Bright, neither of whom stayed long. In a foreword, Sir Richard Bayliss says that Dr Hay has done the St. Alban's Club proud. That is true.

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